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To: Appeal Deciding Officer

This is my recommendation on disposition of the appeal filed by Steve Kelly on behalf of the Montana Ecosystem Defense Council and Alliance for the Wild Rockies, appealing the Bozeman Municipal Watershed Project (BMWP) Record of Decision on the Gallatin National Forest (GNF).

The Forest Supervisor's decision authorizes thinning and prescribed fire within strategic areas of the Bozeman and Hyalite drainages to achieve a meaningful reduction in potential fire severity and extent.

My review was conducted pursuant to, and in accordance with, 36 CFR 215.19 to ensure the analysis and decision are in compliance with applicable laws, regulations, policy, and orders. The appeal record, including the appellants' objections and recommended changes, has been thoroughly reviewed. Although I may not have listed each specific contention, I have considered all the issues raised in the appeal and believe they are adequately addressed below.

The appellants allege violations of the National Environmental Policy Act (NEPA), the National Forest Management Act (NFMA), the Endangered Species Act (ESA), the Clean Water Act (CWA), the Administrative Procedures Act (APA) and the Forest Plan. The appellants request the decision be withdrawn. An informal disposition meeting was held on February 7, 2010, but no resolution of the issues was reached.

ISSUE REVIEW

**Issue 1. The appellants contend, "the BMWP represents a particularly egregious departure from the prescribed stated desire that '... plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner' 36 CFR 219.1(a)." They ask, "Is the Plan seriously deficient, or is the BMWP a rogue activity outside NFMA and Plan direction? Or is it a little of both? The BMWP should not proceed until this deficiency has been corrected."**

**Response:** This concern was not raised in previous comment periods or appeals by MEDC or others. See MEDC and AWR comment letters and content analysis documents (Project File (PF), Docs. #113, 119, 145, 165, 166, 167, 169, and 173). It is unclear why the appellants believes that thinning and prescribed fire, common activities on this Forest and most others in the

west, is any kind of departure from the Gallatin Forest Plan. The FEIS (p.3-265) states, "The proposed fuels management activities are not outside the scope of what has historically been conducted in the drainages."

As addressed in numerous contentions, the BMWP is consistent with the Gallatin Forest Plan (FP) and with NFMA direction. The Forest Plan was approved in 1987 and there have been amendments since that modified the direction. The BMW Decision and analysis are consistent with applicable amendments to the FP and with the Travel Plan (PF, Doc. #196, pp. 1 to 42. The BMWP does not alter the ability of the Gallatin National Forest to provide multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner. The FEIS (pp. 1 to 19) clearly lays out the background, the current vegetative and fuel conditions in a fire-adapted ecosystem, the proximity of private lands, and the concern for the water supply for the City of Bozeman, Montana. It identifies the relationship to the Forest Plan and national direction for fuel reduction. Long-term net public benefits are expected by reducing fire severity in a municipal watershed, by improving firefighter and public safety, and by reducing fire spread and intensity from NFS lands and adjacent private lands (FEIS, p. 1-14, ROD, pp. 5 to 6).

I find the BMW project is in compliance with the Gallatin Forest Plan.

**Issue 2. The appellants allege the Forest Service failed to adequately analyze the effects of climate change in the project area and forest-wide, and also failed to disclose how the project may affect climate change in violation of NEPA, NFMA, the Forest Plan, and APA.**

**Response:** The Forest Supervisor spoke directly to potential effects of the proposal on climate change in her Record of Decision and explains why further analysis, beyond what was already incorporated in the EIS, was not necessary (ROD, p. 44). She recognizes the important role the world's forests play "in removing atmospheric carbon that is contributing to ongoing climate change." However, she provides three articulate reasons why, in this case, further analysis is not necessary. First, this project's effects "would be localized and infinitesimal in relation to the role the world's forest play in ameliorating climate change and indistinguishable from the effects of not taking the action." Second, the proposal does not fall within any [category of] primary contributors of global greenhouse gas emissions (and distinguishes forest management activities such as those proposed here from deforestation; FEIS, p. C-9). Third, the proposal is similarly distinguishable from the "primary human activities exerting negative pressure on the [strong] carbon sink that currently exists in U.S. forests. The affected forests will remain forests, not converted to other land uses, and long-term forest services and benefits will be maintained" (ROD, pp. 44, 45). I find the Forest Supervisor's conclusions are reasoned, well supported, and in compliance with NEPA and APA.

The purpose of the proposed actions is equally well articulated (ROD, pp. 5, 6). It is based on existing conditions and trends within the project area. Selected treatments are strategically placed to reduce threats that exist today (ROD p. 8). Treatments are expected to maintain greatest effectiveness during the 10-15 years after the project is implemented (Ibid). The decision is clearly of limited scope and duration. Global climatic warming, however, has been ongoing for many decades. The conditions and trends on which the purpose of this project is

based are, in part, an expression of the local climate (see similar discussions at SEIS, p. 45). I have reviewed the literature provided by the appellants and find no relevant evidence that would obviate the purpose and need for this decision. The project and analysis are in compliance with NEPA and NFMA.

**Issue 3. The appellants allege the SFEIS fails to deal with the "excessive" fuels issue on an appropriate temporal scale. The computer models used to simulate fire behavior were limited to view only an imaginary, short-duration fixed point in time period following treatment. The analysis essentially ignored the increased risk caused by extensive thinning and logging activities. The SFEIS also does not consider the impacts of rapid re-growth in the understory. The SFEIS fails to adequately analyze and disclose these foreseeable impacts. What is most disturbing about the unproven vegetative management practice of using ridgeline fuel breaks is the total lack of analysis of its effectiveness as a viable tool to manage wildfire.**

**Response:** The Forest conducted a comprehensive analysis of the project's potential effects on fuels and fire behavior (FEIS, pp. 3-3 to 3-30). The analysis examined potential effects at multiple spatial and temporal scales. Diminishing effectiveness of treatments over time was recognized and accounted for (ROD, pp. 8, 23 to 26). The Forest took the appropriate hard look required by NEPA.

**Issue 4. Forest Plan Compliance of Vegetative Management Practices**

**Issue 4, Contention A. The appellants allege that this type of vegetative treatment [WUI] was not a planning scenario (or alternative) during Forest Plan development. Both the project-level and programmatic ecological and economic costs and impacts remain unexplained and undisclosed.**

**Response :** WUI is not a type of vegetative treatment. Wildland urban interface (WUI) is a term that identifies "The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels". This definition is from the Healthy Forests Restoration Act of 2004, and is included in Chapter 1 of the FEIS. WUI was not part of the lexicon in 1987, but it in the present day, it helps define the "why here, why now" question of a proposed action. The vegetative treatments for this project in the WUI are thinning (uneven-aged system and partial harvest) and burning to reduce fuels. The Forest Plan includes fuel reduction in the management goals, objectives and standards. Treatments are prescribed by the silviculturist, and meet a set of criteria described in Forest Plan Appendix A. A key criterion (p. A-5) is, "The system should promote stand structures, compositions, and conditions that minimize damage from pest organisms, animals, wind, and fire." Identifying some NFS lands as WUI does not change any management area direction in the Forest Plan. The response to comments (SFEIS, pp. 265 and 266) states that "nationally, protection of WUI areas and municipal watershed has been a priority for the agency and Congress".

In accordance with NEPA direction, the effects analysis is limited to potential impacts from the proposed action and alternatives. The FSEIS and Chapter 3 of the FEIS is the effects analysis which discloses project related ecological impacts. The effects analysis for economics with

discussion of project costs is found in FEIS (pp. 267 to 268). There are no programmatic impacts from the project.

I find that thinning and prescribed burning were clearly activities considered in the Gallatin Forest Plan.

**Issue 4, Contention B. The appellants allege vegetative management practices chosen by the Gallatin National Forest for the BMWP are not defined in the Forest Plan, with standards and guidelines, nor are the reasons for the choosing these specific methods, in violation of NFMA's Regulations at 36 CFR 219.15 and 36 CFR 219.27.**

**Response:** The vegetation management practices included in Alternative 6, the alternative selected in the ROD, as described in the FEIS (p. 2-11), include:

- Burning (defined in the Gallatin FP, pp. VI-4 and VI-27)
- Mechanical cutting and piling (various silvicultural systems defined in the Plan (pp. VI-5 to VI-45, and Appendix A, Vegetation Management Practices)
- Partial harvesting (various silvicultural systems from thinning to individual tree selection, defined in the Plan, Chapter VI and Appendix A).

These treatments, and why they are chosen, are clearly explained in the FEIS (p. 1-16). For example:

- "Cutting small diameter trees and leaving larger ones to reduce the fuel loading and break up the vertical and horizontal composition of the fuels"
- "Mechanical or hand cutting and piling smaller, younger trees would reduce the density of small diameter stands"
- "Prescribed burning in less dense stands of trees to reduce ground cover and smaller trees in order to keep the stands in an open condition with less chance of rapid fire spread"

These actions are designed to meet the purpose and need of the project, as described in the FEIS (pp. 1-13, 1-14, and 3-9). The Forest Plan allows for timber harvest and vegetation management in lands suitable for timber production and on lands unsuitable for timber production to achieve multiple use values (other than timber production). The Forest Plan does not prescribe vegetation management practices for any site-specific project. The Forest Plan and Record of Decision for the Plan state that the final decision for the vegetation management practices (silvicultural system) chosen for each vegetative type and circumstance shall be made by a certified silviculturist (PF, Doc #18 p. A-1, A-10) and based on site-specific evaluation of biological and management factors at the project level (Doc #23, Forest Plan ROD, pp. 9 and 26). The Forest Plan contains direction that speaks to methods for implementation of vegetation management (Doc. #18, pp. II-2, 4, 6, 19 to 20, 23, and 28). Diagnoses and prescriptions written by the certified silviculturist on the interdisciplinary team are at PR Doc. #542.

The appellant cites a version of the 36 CFR 219 regulations that are no longer in effect or apply to site specific decisions. On December 18, 2009, the Department of Agriculture issued a final rule reinstating the National Forest System Land and Resource Management Planning rule of November 9, 2000, as amended (2000 rule) (74 FR 242 [67059-67075]). The 2000 rule states: Projects implementing land management plans must comply with the transition provisions of 36

MA 7 includes riparian management areas. The ROD (p. 55) addresses MA 7 directly and states, "No riparian timber harvest is included in my decision (SFEIS p.33)." The fisheries biologist determined that water temperature would be maintained, as would minimum instream flows. The project will also maintain suitable habitats for those species dependent upon riparian areas for their existence (SFEIS, p. 66). This meets the Forest Plan standards for MA 7. Appendix A of the ROD discloses a 100-foot no ignition buffer adjacent to Class 1 streams (page 76). Class 1 streams support fish. This is analyzed in SFEIS (pp. 60 to 63), with design features explicitly for resource protection.

MA 12 includes a standard to schedule vegetation management practices, such as prescribed fire, to maintain or improve the quality and quantity of wildlife habitat (F Plan, p. III-37). A qualitative and quantitative assessment of habitat for a diversity of species was conducted at the project level. It is included in the effects analysis of the FEIS and expounded upon for big game in the Supplemental FEIS (pp. 10 to 30). Presently just one percent of the BMW analysis area provides non-forest foraging areas for deer and elk, and that open forest types provide the majority of foraging opportunities. Thomas recommended a forage:cover ratio for big game of 60:40. The existing condition is presently 16:84. The selected alternative will change that ratio to 34:66, and while still not optimum, is an improvement for big game habitat. The wildlife biologist recognizes there will be some displacement during implementation. They also conclude that a large-scale fire event in the BMW project area could easily reduce hiding and thermal cover to a much greater degree than would occur as a result of fuel reduction treatment (SFEIS, p. 30). The ROD (pp. 50 and 55) discusses NFMA consistency requirements for project-specific findings, including harvest in MA 12 and suitability for timber production.

There are no proposed treatments in MA 17 (see discussion in ROD, p. 56). The decision is consistent with MA direction in the Forest Plan and moves the project area toward MA goals.

**Issue 5. The appellants allege the Gallatin National Forest must disclose to the public just how much of the Forest is considered outside the range of natural variability in alleged "forest health" terms. It must also disclose how much of the Forest is to be treated for fuel reduction in a similar manner that emphasizes manipulating fuel conditions over natural ecological processes.**

**Response:** The appellants presented literature rebuffing the use of "natural range of variability" during scoping (Doc. #113, pp. 6 to 7), but now request a forest-wide quantification of lands using a concept they don't believe is valid. They also contend treatments emphasize manipulating fuel at the expense of natural ecological processes. "Range of natural variability" appears once in the FEIS and SFEIS in the context of fire size, frequency, intensity, and severity. It is not applied in forest health terms, alleged or otherwise.

The project analysis and the extent of analysis for insect and disease is described in the FEIS, Chapter 3, Forest Vegetation Methodology and insect/disease analysis (Alternative 6). The analysis area is three timber compartments, totaling approximately 52,000 acres. The ROD discloses that 4,675 acres are to be treated by the BMWP. The Current Condition section highlights the current insect/disease condition for the area as a whole, which takes into account current age and successional stage resulting from previous disturbance or lack of disturbance

CFR §219.35, but not any other provisions of the planning rule. Projects implementing land management plans and plan amendments, as appropriate, must be developed considering the best available science in accordance with §219.35(a). Projects implementing land management plans must be consistent with the provisions of the governing plans.

1. Consideration of best available science: The decision should document and the records clearly demonstrate the consideration of the best available science. See the June 21, 2007 WO memo on the subject for further discussion. (Please note that the June 21 memo has a typo; the reference to 219.36(a) should read 219.35(a)).
2. Forest Plan consistency: All projects, permits, etc. must be consistent with the governing Forest Plan (16 USC 1604 (i)). The decision should document and the record clearly support that the decision is consistent with the Plan, including all standards and guidelines.

The vegetation management practices to be applied in this project are fully consistent with the Gallatin Forest Plan. The decision is in compliance with 36 CFR 219.36(a), by documenting the use of best available science and documenting Forest Plan consistency. The record clearly supports both.

**Issue 4, Contention C. The appellants allege Management Areas (MAs) 5 and 9 both allow timber harvest, and prescribed fire, but only if it maintains or enhances recreation and visual quality. The BMWP does neither. MA 7 is primarily a riparian management zone where limited thinning and burning is allowed to protect soil, water and habitat. ... The BMWP SFEIS provides no documentation to demonstrate how the project complies with the "maintain and improve" standard. MAs 12 and 17 are classified "unsuitable" for timber production with emphasis given to maintain and improve wildlife habitat, and grazing lands with important big game habitat. The BMWP will increase disturbance, and cause displacement of animals. Clearly, meeting the wildlife goals is the focus of these MAs. Ignoring and dismissing the spirit and letter of Plan standards that require "maintain and improve," and "habitat improvement" violated NFMA and NEPA.**

**Response:** The recreation standard for MA 5 is to provide roaded recreation opportunities (F Plan, p. III-14). MA 5 is addressed directly in the ROD (p. 54). The recreation resource analysis in Chapter 3 of the FEIS states, "All existing recreation opportunities will continue to be available after the project has been implement and completed but in a slightly modified visual setting." The site specific forest plan amendment addresses the visual quality standard (FEIS, pp. 2-11, 15, 20, 22; ROD, p. 47).

The recreation standard for MA 9 is to provide dispersed recreation in a roaded natural appearing setting (F Plan, p. III-27). MA 9 is addressed directly in the ROD (p. 55). The recreation resource analysis in Chapter 3 of the FEIS states, "All existing recreation opportunities will continue to be available after the project has been implement and completed but in a slightly modified visual setting." Mitigation is described in the ROD for recreation, scenery and reasons for the decision as it relates to scenery and recreation (ROD, pp. 14, 17, 18, 21 to 23, 28 to 29, and 33).

(FEIS, pp.3-212 to 216, 219, and 249 to 256). Mature and old growth stands constitute an average of 75 percent of the project area (FEIS, p. 3-212). It is well-established that fire suppression has altered the disturbance regime on this landscape (Project File, Docs. #378, 356, 361, 363, 367 and 371). The FEIS (pp. 1-5, 1-7 to 1-9, 3-7, and 3-213) provides the historical context for fire/fuels and vegetation and how existing stand condition is a result of past activity and disturbance. The FEIS provided a response to comments related to historical conditions and restoration (pp. C-6 to 8, C-15, and C-19).

In terms of natural ecological processes in regard to insects, the vegetation analysis displays that bark beetles and spruce budworm will continue to be active across the project area (FEIS, pp. 3-211 to 251). There are recognized benefits to forest health from thinning, but it is not part of the purpose and need. This subject was covered in the FEIS, Chapter 4 Response to Comments on Insects/Disease, clarifying the purpose and need in relation to insects (p. C-18, 19).

Reasonably foreseeable activities are addressed in the cumulative effects section for fuels (FEIS, p. 3-27). The ROD (p. 3) includes activities on other ownership in the project area, in city of Bozeman and State lands. The analyses and ROD present an adequate analysis to inform the public and for the responsible official to make a reasoned decision.

**Issue 6. The appellants allege the Forest refused to study in detail any alternative which would have implemented prescribed fire fuels treatments that did not include removal of commercial wood products. The FS also refused to study in detail any alternative that considered the impacts of their proposed actions on climate change.**

**Response:** As explained in FEIS (p. 2-7), Alternative 4 was specifically created in response to scoping comments from the appellants requesting that the Forest consider an alternative limited only to prescribed burning and to consider an alternative with no additional roads (PF#113, p. 4 (no logging) and 14 (no road building)). This alternative combined an effort to meet the project's purpose and need without thinning large trees using logging methods. Other noteworthy features of this alternative are that it reduced the amount of proposed prescribed burning in dense stands by almost half: the proposed action had 3,982 acres of prescribed burning, while Alternative 4 had 2,046 acres. Alternative 4 did not require a site-specific forest plan amendment for visual quality as Alternatives 2, 3, and 6 would have.

While this alternative was considered in detail (and was identified as the Environmentally Preferred alternative), the ROD (p. 41) clearly explains this alternative was not selected because the analysis found that since it would treat the fewest acres by far it was the least effective of the action alternatives at meeting the purpose and need for the project. It would also be the least effective when considering the parameters for changed fire behavior and effectiveness toward meeting project objectives (FEIS, p. 3-29 through 3-30; SFEIS, pp. 27 to 30).

The Forest considered a "climate change" alternative, and appropriately determined detailed study was not warranted in this case (FSFEIS, pp. 210, 211).

**Issue 7. Wildlife**

**Issue 7, Contention A. The appellants allege the Forest Service is in violation of NEPA and the ESA because they only analyzed direct, indirect, and cumulative impacts from ridgeline firebreaks and temporary roads to big game and failed to analyze them for other wildlife species such as MIS, threatened and endangered species, migratory birds, etc. They further allege no total (open or closed) roads and trails analysis was conducted or disclosed.**

**Response:** Direct, indirect, and cumulative effects to wildlife species were analyzed for the alternatives can be found summarized in the SFEIS (pp. 19 to 30). This analysis includes the proposed activities of fuelbreaks and temporary roads where applicable to each alternative. More detailed analysis for threatened and endangered species in regards to this project can be found in the FEIS (pp. 3-183 to 3-190, 3-360, 3-362, and 3-366). Forested ridges were addressed as travel corridors for bear and forest plan direction for lynx (NRLMD) was addressed, especially concerning the constructing firebreaks on ridgelines or saddles (FEIS, pp. 3-174 and 3-366).

Compliance with this NRLMD guideline (VEG G4) was discussed in the Biological Assessment and Biological Opinion for lynx that were prepared for this project (PF, Docs. 619 and 621). The US Fish and Wildlife Service (USFWS) determined that the NRLMD Guideline VEG G4 would not be explicitly met for the proposed action but since the fuel breaks would not be permanent (not clear cut and maintained open, but thinned), all ridges in the project area would not be impacted and habitat connectivity is not limited in the North Gallatin Lynx Analysis Unit, that these proposed ridgeline fuel breaks are not likely to adversely affect lynx. Further, the acres treated to create these fuel breaks fall within the range of acres treated for fuel management projects analyzed in the first-tier BO for lynx so this project is in compliance with this direction and the ESA (PF, Doc. 621, p. 2).

The analysis for migratory birds, as it relates to impacts from fuel breaks and roads is also located in the FEIS (pp. 3-384 to 385) and specifically mentions impacts from vegetation treatments and habitat fragmentation that may result from the proposed alternatives. Roads and trails analysis and densities, including secure habitat calculations were completed for the project (SFEIS, pp. 23 to 28, and Docs. 634, Doc. 635, Doc. 664, Doc. 665).

**Issue 7, Contention B. The appellants allege the Forest Service is in violation of NEPA and NFMA by not mapping elk and big game migration routes and not taking a 'hard look' at the project's impacts to migration routes.**

**Response:** There are no definitive migration routes known to exist within the project analysis area and no known staging areas used by big game in the project analysis area according to Kurt Alt, former Region 3 Wildlife Biologist for Montana Fish, Wildlife, and Parks (PF, Doc. 741, and SFEIS, p. 14). Forest Plan standards for key habitat components also include migration routes. Key habitat components were mapped for the project analysis area to the extent that locations on the landscape are known, or can be modeled with existing data (SFEIS, p. 16). Since there are no readily identifiable migration routes or staging areas in the project analysis areas (PF, Doc. 741), these were not mapped as key habitat features for this project (SFEIS, p. 18). Potential effects to big game movements were analyzed in the direct and indirect effects section for each alternative (SFEIS, pp. 23 to 28). This project is in compliance with the Forest Plan, NEPA, NFMA and APA.

**Issue 8, Water Quality**

**Issue 8, Contention A. The appellants allege the addition of sediment and organic debris to impaired creeks before a TMDL assessment has been completed is a violation of the CWA becasue both Bozeman Creek and Hyalite Creek are listed WQLS (CWA 303(d)) creeks and TMDLs have not been completed on Hyalite Creek, Bozeman Creek, or Leverich Creek. Appellants contend the addition of sediment and organic debris to impaired creeks before a TMDL assessment has been completed is a violation of the CWA.**

**Response:** The ROD and Final SFEIS accurately state that Hyalite Creek currently meets Montana A-1 Classification standards. The TMDL listings include detailed water quality information in the "assessment record" via the DEQ website cited in the SFEIS. None of the streams in the BMW project area, including Bozeman Creek or Hyalite Creek, are 303(d) listed for sediment (FSFEIS, pp. 136, 138, 142). The definition of "naturally occurring" (Final SFEIS p. 145) allows some sediment levels above natural providing "all reasonable land, soil, and water conservation practices have been applied" per ARM 16.20.603. (11).

The project BMPs use standard or in many cases more stringent BMPs than Montana Forestry BMPs or Montana SMZ rules and certainly meet the definition of "all reasonable". The Montana Code Annotated – 2007 75-5-703 section (10)(c) additionally specifies that "Pending completion of a TMDL on a water body listed pursuant to 75-5-303 new or expanded non-point source activities affecting a listed water-body may commence and continue if those activities are conducted in accordance with reasonable land, soil, and water conservation practices." This provision allows for the small sediment increases associated with the BMW project since "reasonable" BMPs are being planned and required. The Montana DEQ 12/10 letter specifically endorses the BMW BMPs as Clean Water Act (CWA) compliant (PF, Doc. #65). Compliance with Montana water quality standards are described in the ROD (pp. 2, 7, 19 to 21, 26 to 27, 59 to 60, 64). Compliance with Forest Plan sediment standards and Montana water quality standards are described in the SFEIS (pp. 59, and 177 to 178). Montana DEQ TMDL listing information, Montana Code for TMDL listed streams, and CWA compliance are included in the SFEIS (pp.136 to142, 145, 178, and 179).

**Issue 8, Contention B. The appellants opine that the Forest Service violated NEPA's "hard look" requirement by failing to disclose the amount of sedimentation that will result from more road miles and increased road use during and after project implementation. They contend cumulative effects on water quality and wild trout were not adequately analyzed.**

**Response:** The use of haul roads and associated sediment is described in the FEIS in the sediment modeling methodology (SFEIS, pp. 147 to 151) and displayed for each alternative. The sediment modeling used road mileage and use (traveled, closed etc.) for appropriate sediment coefficients. BMWP has very limited dirt road haul distance as most of the haul route is on the paved Hyalite Canyon road. Sedimentation from roads was considered, modeled and disclosed in the water quality section of the SFEIS (pp. 134 to 178). The discussion (SFEIS, pp. 149 to 151) specifically addresses the model WEPP:Road and that it "was used to estimate road sediment changes from increased log truck use" (See also Docs. # 604 and 605.) Direct and

indirect effects to water quality, particularly sedimentation, for Alternative 6 are discussed in the SFEIS (pp. 169 to 174), with cumulative effects discussed on the following pages (pp. 174 to 175). The hydrologist and fisheries biologist used a cumulative effects checklist (PF, Doc. #243), and a supplemental cumulative effects checklist (PF, Doc. #244). The Cumulative Effects Analysis for fisheries is provided in the SFEIS (pp. 43 to 46, 48 to 49, 52, 54 to 56, 59 to 60, and 62). The ROD (p. 3) includes a discussion of new proposed projects between March 2010 and November 2011. It is clear the SFEIS considered these additional actions.

I find the SFEIS provided analysis and disclosure of cumulative effects on water quality and fisheries, giving the hard look necessary at all existing and reasonably foreseeable actions for a reasoned decision and informing the public.

**Issue 8, Contention C. The appellants allege that BMPs have failed and do not maintain and improve water quality. They assert that the Forest Service has violated NFMA by failing to monitor BMP effectiveness.**

**Response:** The primary reference for Best Management Practices is in the SFEIS (pp. 155 to 158) where the GNF BMP monitoring is discussed. The remaining references describe GNF monitoring projects relevant to BMW, which were used to develop the BMPs for BMW. The BMPs listed in the BMW project are not "untested, unmonitored". The Forest has had an extensive BMP implementation monitoring program for the last several years as well as stream water quality monitoring to determine the effectiveness of BMPs and adjust BMP appropriately. A specific example (SFEIS, pp. 242 to 243) is the GNF "enhanced" SMZ BMPs developed in cooperation with Trout Unlimited to provide additional protection to the Montana SMZ guidelines (FSEIS, p. 241).

The Forest has produced several Forest Plan monitoring reports since the early 1990s, which included detailed descriptions of BMP monitoring reports, results, and appropriate BMP adaptations in response to the Forest Plan monitoring requirements (Forest Plan, pp. IV-4 and IV-5). The Appendix A BMPs in the SFEIS are based on the Montana Forestry BMPs which have been extensively tested and monitored every two years in Montana starting in 1988. The Final SFEIS was updated with several other Gallatin NF BMP reviews which document BMP effectiveness. The Montana DEQ 12/10 letter specifically endorses the BMW BMPs as CWA compliant. The Forest looked at the effectiveness of BMP's in relation to the project area (FSFEIS, pp. 145, 147, 155 to 158, 175 to 178, Appendix A, Appendix B, C-22, C-25, C-27; BMP's inclusion, expansion and effectiveness, ROD, pp. 15, 17, 21, 32, 33, 42, 67 to 78; BMP effectiveness reviews on the GNF, PF, Docs. 571, 573, 578, 579, 585, 604, 605; Montana DEQ 12/10 letter of CWA compliance, PF, Doc # 65).

**Issue 9. Fisheries**

**Issue 9, Contention A. The appellants opine that the Forest Service violated NFMA and failed to follow its Forest Plan by failing to monitor BMP effectiveness and MIS, by authorizing a project that will maintain "impaired" trout habitat conditions, continue to degrade wild trout habitat, including potential westslope cutthroat trout habitat.**

**Response:** Forest Plan monitoring compares actual results to those projected in the Plan. Monitoring provides information to the decision-maker and public on progress and results of implementation of the Forest Plan. This monitoring is at the Forest Program level, not project level. The Project File (Doc.#18) contains the Forest monitoring requirement relating to MIS Forest Plan Monitoring Item # 16. The Gallatin NF MIS Monitoring Report for wild trout as required by the GNF Forest Plan entitled, "Distribution and Status of GNF Management Indicator Species" is discussed in the SFEIS (p. 31), and in the Project File (Doc #253). Other Forest Plan Monitoring Reports are found in the Project File (Doc. #916).

I find monitoring was conducted in compliance with NFMA and the Gallatin Forest Plan, and that the fisheries and water quality analyses constitute the requisite hard look to assess effects to fisheries habitat.

**Issue 9, Contention B. The appellants allege almost nothing has been done to accurately determine actual westslope cutthroat trout (WCT) distribution in Hyalite and Sourdough. The effects on the populations in these drainages were not adequately assessed. The Forest Service failed to discuss why Hyalite Creek and Bozeman Creek do not support viable WCT populations.**

**Response:** Aquatic species status and distribution are described in the FSFEIS (pp. 34 to 38 and 40). It discusses why WCT are no longer present in these drainages and unlikely to naturally repopulate these stream segments. The SFEIS provides a thorough analysis of potential effects to the existing fisheries.

**Issue 9, Contention C. The appellants allege the Forest Service violated NEPA's "hard look" requirement by failing to disclose the amount of sedimentation that will result from more road miles and increased road use during and after project implementation. Cumulative effects on water quality and wild trout were not adequately analyzed.**

**Response:** Similar contentions were raised and reviewed under Issue 8, Water Quality above. The FSFEIS (pp. 31 to 69) provides a thorough and detailed analysis of potential project effects on wild trout. The appellants' claims are unfounded. The Forest took the requisite hard look.

**Issue 9, Contention D. The appellants allege MA 7 directs the Forest Service to provide for optimum water temperatures for cold water temperatures. They contend the SFEIS fails to discuss how increased logging and road-building and prescribed burns will cumulatively affect water temperatures and populations of MIS fish species, especially WCT in the project area.**

**Response:** There is no riparian harvest, and the ROD (pp. 7, 12, 15, 76 to 78) indicates that no prescribed fires would be ignited within 100 feet of perennial streams. The response to the comment indicates the same thing (FEIS, Appendix C, p. 24). Prescribed burns are ignited in the spring and fall when burning conditions are much less volatile and the riparian area are much wetter (FEIS, p. 16), which adds additional protection to the riparian areas. The project is in compliance with MA 7 water temperature requirements, and all applicable laws, regulations, and Forest Plan direction regarding aquatic habitat (SFEIS, pp. 63 and 66).

**Issue 10. The appellants allege that weeds will increase because of this project. The several mitigations such as washing equipment, identifying and treating weed infested areas, and maintaining weed free equipment parking areas that are included in this project will not work to reduce the spread of weeds. The FS admits it knows prevention works best, ignores its own advise, yet cannot point to a single case where management results in successful prevention or substantial prevention of the spread of weeds. The Bozeman Municipal Watershed and SFEIS and ROD did not include an action alternative includes land management standards or strategies that will prevent new weed infestations by addressing the causes of weed infestation. The FS is in violation of NFMA and NEPA.**

**Response:** The prevention measures are based on Clark (2003), Forest Service Guidance to Noxious Weed Prevention Practices (2001), and FMS 2080. Effectiveness of the measures is discussed in the SFEIS (pp. 183 to 185). The ROD (p. 39) states, "Based on experience with implementing timber projects in more recent decades with these practices, the weed experts on the Forest have observed lower spread and establishment of invasive weeds when these practices are implemented (SFEIS, p. 202, personal communication Susan Lamont)." The SFEIS (p. 202) states, "Mitigation included in this project has proven to substantially reduce the numbr of weed becoming established in this area." Also, the prevention measures are "based on experience of implementing vegetation projects in more recent years"; "they have observed lower spread and establishment of invasive weeds when these practices are implemented." In the SFEIS the analysis cites Wilson et al (1999), which indicates that weed seeds are removed from mechanical equipment and collected for disposal during weed washing. The analysis is consistent with NEPA by discussing the effectiveness of the prevention measures.

RECOMMENDATION

I have reviewed the record for each of the contentions and have found the analysis and decision adequately address the issues raised by the appellants. I recommend the Forest Supervisor's decision be affirmed and the appellants' requested relief be denied.

KEVIN T. RIORDAN
Forest Supervisor

cc: Teri Seth, Steve Christiansen, Mary C Erickson, Ray G Smith, Peter N Zimmerman